

a²

(a) determining a condition of the heart from among a plurality of conditions of the heart;

(b) selecting at least one mode of operation of the implantable heart stimulator which operation includes a unique sequence of events corresponding to said determined condition; and

(c) executing said at least one mode of operation of said implantable heart stimulator[, whereby] thereby to treat said determined heart condition.

In claim 6, line 3, after "stimulator" insert --corresponding to respective arrhythmias--;
line 3, before "modes" insert --unique--.

In claim 8, line 5, delete "an" and insert --a naturally induced--.

Rewrite claim 10 as follows:

a³

10. (Amended) An implantable heart stimulator [for monitoring and automatically treating a plurality of conditions of the heart, and] capable of monitoring and detecting a plurality of arrhythmias, and capable of being programmed to undergo a single or multi-mode of operation corresponding to a respective arrhythmia to treat automatically [any of] the detected arrhythmia[s], said stimulator comprising:
determining means for determining the occurrence of [a given condition from among said] one of a plurality of conditions of the heart;

a³

selecting means responsive to said determining means for selecting at least one mode of operation of said implantable heart stimulator corresponding to a respective one of said plurality of conditions for automatically treating said determined conditions; and

executing means for executing a sequence of events defined by said at least one mode of operation, whereby to treat said determined condition.

Claim 13, line 1, change "8" to --10--.

Claim 14, line 1, change "8" to --10--.

Claim 15, line 3, delete "an" and insert --a naturally induced--;

line 6, after "said" insert --natural--.

Rewrite claims 18, 19, 20, 21, 25, and 26 as follows:

a⁴

~~2018~~. (Amended) An implantable heart stimulator for monitoring a heart and treating a plurality of conditions of said heart, comprising:

input means for receiving various status and sensor input[s] signals;

controller means for processing said various status and sensor input[s] signals to determine the occurrence of a given condition from among said plurality of conditions, and for selectively performing a sequence of events defined by at least one mode of operation corresponding to and for

treating said determined condition, and issuing corresponding control output[s] signals; and

output means responsive to said control output[s] signals of said controller means for electrically stimulating the heart so as to treat said determined condition.

a⁴
21¹⁸. (Amended) The stimulator of claim ²⁰18[,] wherein said [at least one mode of operation comprises] controller selectively performs a plurality of modes of operation[, said controller means comprising] and includes first and second processors, said first processor [executing] adapted to execute a first group of said plurality of modes of operation so as to treat a first group of [said] a corresponding plurality of conditions, said second processor [executing] adapted to execute a second group of said plurality of modes of operation so as to treat a second group of [said] a corresponding plurality of conditions.

²²20. (Amended) The stimulator of claim ²⁰18, further comprising data input/output channel means for [providing data ~~to~~ and from] transferring data with said implantable heart stimulator.

²³21. (Amended) The stimulator of claim ²⁰18[,] further including an input/output data channel for transferring data with said controller means and wherein said controller means comprises at least one programmable microprocessor for generating said output control signals in dependence on said data signals received through said input/output data channel.

20

a⁵ 21-25. (Amended) The stimulator of claim 18, wherein said at least one mode of operation includes a cardiac pacer mode of operation and an automatic defibrillator mode of operation, said input means receiving a first sensor input signal corresponding to presence or absence of [an] a naturally induced R-wave of the heart and a second sensor input signal corresponding to presence or absence of a forced R-wave of the heart, said controller means determining the absence of said natural R-wave of the heart and responding thereto [for] by issuing a cardiac pacer control output signal to [cause] effect cardiac pacing of the heart, said controller means subsequently determining the presence or absence of said forced R-wave of the heart and responding to the absence thereof [for] by issuing an automatic defibrillation control output [causing] signal to effect automatic defibrillation of the heart.

27

28 26. (Amended) The stimulator of claim 25, wherein said controller means responds to the presence of said forced R-wave of the heart [for] by monitoring said R-wave sensor input[s] signal and inhibiting further electrical stimulation of the heart until absence of said naturally induced R-wave of the heart is detected.

Insert the following new claims:

a⁶ 27-27. A stimulator as recited in claim 18 further including

30

24

a program control store for defining a sequence of electrical events for at least one operating mode to pace, cardiovert or defibrillate a heart; and

means for further defining at least one parameter associated with said at least one operating mode.--

a⁶
--³⁰~~28~~. A stimulator as recited in claim ²⁹~~27~~ wherein said defined parameter includes the level of intensity of a pacing signal, defibrillating pulse, or cardioverting pulse.

--³¹~~29~~. The stimulator as recited in claim ³⁰~~28~~ wherein the defined sequence of electrical events includes a set of step-wise increased energy levels for said defibrillating, and said executing means issues said defibrillating pulses in successive step-wise increased energy levels until completion of defibrillation.--

--³³~~30~~. The stimulator as recited in claim ³⁰~~28~~ when the defined parameter includes a preprogrammed number of defibrillating pulses.--

--³²~~31~~. The stimulator as recited in claim ³¹~~29~~ wherein the defined parameter includes a preprogrammed number of defibrillating pulses.--

--³⁴~~32~~. The stimulator as recited in claim ³⁰~~28~~ wherein the parameters defined by said control store include any combination of the group including the number and level of pulses which treat the heart, periodicity of pulses which treat the heart, tachcardia threshold rate, R-R coupling interval, decrement for R-R coupling interval, width of pulses which treat the heart, or atrial-ventricular delay; and

said executing means effects treatment of the heart in accordance with at least one of said defined parameters.--

³⁰
--~~33~~²⁹. The stimulator as recited in claim ²⁷
further comprising
an input/output data channel for transferring data with said control means,

^{a^b}
said control means generating said output control signals in accordance with the data signals received through said input/output data channel.--

³⁵
--~~34~~³⁴. The stimulator as recited in claim ³²
further comprising
an input/output data channel for transferring data with said controller means,

said control means generating said output control signals in accordance with the data signals received through said input/output data channel.--

¹⁸
--~~35~~¹⁸. The stimulator as recited in claim ³⁰
further including a programmable control store for defining a sequence of electrical events corresponding to at least one mode of operation and corresponding operating parameters associated with said mode of operation; and

an input/output data channel connected to said control store for transferring data therewith which define the sequence of electrical events to be performed by said at least one mode of operation thereby to affect treating operations particularly suited to the patient --